IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA   )
)
         v.   )   Criminal No. 19-369
)
LAFON ELLIS   )

EMERGENCY MOTION FOR STATUS CONFERENCE HEARING

Mr. Ellis requests an emergency status conference hearing to address Cybergenetics's failure to produce materials this Court Ordered produced in the Protective Order issued at ECF NO. 161.

While the Protective Order does not address a procedure for the parties to follow when alleged violations occur, except in circumstances of challenging confidentiality designations[1], undersigned counsel emailed back and forth with AUSA Conway multiple times and attempted to call AUSA Conway once yesterday and three times today to resolve the issues without judicial intervention. The government does not believe that Cybergenetics violated the Protective Order and therefore Mr. Ellis seeks judicial intervention.

The emergency hearing is sought because Mr. Ellis's expert, Nathan Adams, is in town from out-of-state specifically to review the source code at Cybergenetics and cannot conduct said review in the manner intended by this Court with ordered

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[1] Subsection 6.1, 6.2. and 6.3, discuss meet and confer requirements before judicial intervention related to confidentiality designations.

materials missing. Mr. Adams is ready to testify about his findings and explain to the

Court what materials he found and did not find on the inspection computer.

Basis for the Hearing

After inspecting the materials produced at Cybergenetics, Mr. Adams noted

missing materials from the list of materials ordered to be disclosed. Specifically,

Cybergenetics is in violation of Section 3(b), 3(c), 3(d), 3(f) and 9(c) of the Protective

Order.

Section 3 titled "SCOPE" of the Protective Order states:

The protections of this Order cover the following material that is hereby
ordered to be disclosed to Defense Counsel and their Experts:

a) TrueAllele source code for the version used in the instant case:

b) All software dependencies including third-party code libraries,
toolboxes, plugins, and frameworks;

c) Software engineering and development materials describing the
development, deployment, and maintenance of the version(s) of the
TrueAllele software system used in the instant case, including the
software engineering documents recommended by organizations
such as the Institute of Electrical and Electronics Engineers or the
Internal Organization for Standardization;

d) All records of software glitches, crashes, bugs, or errors encountered
during the TrueAllele developmental validation study;

e) Software version numbers of the components of the TrueAllele
system used for the developmental validation study;

f) All records of unexpected results, including false inclusions, false
exclusions and the conditions under which the unexpected results
were achieved.

Section 9 titled "SOURCE CODE AND RELATED DISCOVERY" of the

Protective Order states in pertinent part,

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9(c). Any source code produced in discovery shall be made available for inspection, in a format allowing it to be **reasonably reviewed, searched and tested**, during normal business hours or at other mutually agreeable times, at the offices of Cybergenetics, the Producing Party . . . (emphasis added).

Specific Violations

Cybergenetics is in violation of Section 3(b). Section 3(b) requires disclosure of "All software dependencies including third-party code libraries, toolboxes, plugins, and frameworks." *See* ECF No. 168 at 3.

Here, while Cybergenetics claims that all third-party code libraries, toolboxes, plugins, and frameworks were provided, Cybergenetics failed to disclose "all software dependencies." Specifically, "Databases" were not provided on the source code computer which are routine materials and expected to be part of "software dependencies" for TrueAllele. Databases are collections of data in an organized structure. We know that TrueAllele's database is fundamentally required for its operation based on an article written by Dr. Perlin himself. *See* Dr. Mark W. Perlin, MathWorks, *Cybergenetics TrueAllele Technology Enables Objective Analysis of Previously Unusable DNA Evidence* (2013), https://www.mathworks.com/company/newsletters/articles/cybergenetics-trueallele-technology-enables-objective-analysis-of-previously-unusable-dna-evidence.html). We know that TrueAllele uses the specific database brand PostgreSQL. While reviewing the inspection computer, Mr. Adams saw no database management systems installed on the inspection computer and no database backups or configurations that could be used if such a system was installed. There is no network

access, per the order, so it cannot be connected to a database on a server such as the locked-down database they set up for him to use on the casework system PC. Without the database(s) installed and available on the inspection PC, it is reasonable to expect that TrueAllele's full functionality cannot be examined. That's a problem.

Cybergenetics is in violation of section 3(c). Section 3(c) requires disclosure of "Software engineering and development materials describing the development, deployment, and maintenance of the version(s) of the TrueAllele software system used in the instant case, including the software engineering documents recommended by organizations such as the Institute of Electrical and Electronics Engineers or the Internal Organization for Standardization" *See* ECF No. 161 at 3.

Here, while a change log was provided, software engineering and development materials are missing. Most notably, Cybergenetics did not provide instructions for compiling/building TrueAllele. The build instructions squarely fall into "Software engineering and development materials describing the development, deployment of TrueAllele" Build instructions are a practical matter fundamental to programming. Any software that's been "built" from source code into an executable program involved the developer following some build process. The expert cannot build the version of TrueAllele used in this case from the source code provided to us without being able to follow that same process.

By way of analogy, if software was LEGOs, the source code is the description of each type of brick, *e.g.*, "2x3 and short height" or "1x2 and normal height." A pirate ship might have the same type of basic brick used in 200 locations but only one rudder

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piece. LEGO build instructions describe how many times each type of brick is used, where they go, and the order of assembly. Without the build instructions, you have a pile of bricks and your intuition. A key component to software is "reuse" – the ability to code a component once and infinitely reuse it. That's highly desirable for many reasons – time to construct and ease of maintaining 1 vs 1,000 identical components. Without build instructions, software isn't a pile of all 1,000 physical bricks you might need but only one instance of each unique brick that might be replicated throughout the build process 1,000 times. The build process replicates these components as needed and links them all together in the appropriate order.

Cybergenetics further violates Section 3(c) by failing to provide software engineering documents recommended by organizations such as the Institute of Electrical and Electronics Engineers or the Internal Organization for Standardization have not been provided. These are basic industry standard documents that Cybergenetics failed to produce.

Cybergenetics is in violation of section 3(d). Section 3(d) requires disclosure of "[a]ll records of unexpected results, including false inclusions, false exclusions and the conditions under which the unexpected results were achieved." *See* ECF No. 161 at 3.

Here, Cybergenetics failed to disclose any records.

Cybergenetics is in violation of section 9(c). Section 9(c) states "[a]ny source code produced in discovery shall be made available for inspection, **in a format**

allowing it to be reasonably reviewed, searched and tested" (emphasis added). *See* ECF No. 161 at 12.

Here, the source code provided was reasonable searchable but not reasonably reviewable or testable because of Cybergenetics's failure to disclose materials in section 3(c).

Respectfully Submitted,

/s/ Khasha Attaran
Khasha Attaran
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